



ABACUS



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ATARI BAY AREA COMPUTER USERS SOCIETY

1987

PRESIDENT'S MESSAGE

TRAMIELIANA: First a chipmaker, then a store chain. ATARI heads for "vertical integration". For those who haven't heard, ATARI just bought The Federated Group of electronics stores for \$67.3 mil. Now, lets follow the logic here. Why beg chip makers to deliver on time? Buy the chip maker. Why beg stores to carry your product? Buy the stores. Why beg consumers to choose your product? Umm... There is a way to buy them. Provide lots of follow up support. If you can not afford to do it one to one then do it through user groups. More service bang for the buck. Give each group a laser printer on condition that it be made available to any ATARI owner at a reasonable price. Even at \$1500, few individuals will be able to afford to own one but would still have access to desktop publishing. Help user groups to set up classes for ATARI owners and then let dealers offer a couple of these classes to sweeten the deal for reluctant buyers. See these ideas lift majestically off the launch pad. As the rockets burn out, see them silently disappear from sight.

THE SEPTEMBER MEETING: Not the first Saturday--that's Labor Day--but the second Saturday, September 12, at the usual times, 10:00 for 8-bit, Noon for STs. FEATURE: Broderbund will be there to show off the old and new for both ATARI communities. Don't miss it. For those STERS who fondly remember programming in windowless BASIC we will have more copies of DBASIC with manual for the regular PD price of \$5.00. Those who bought last meeting may bring in the disk and have it replaced by a new one which adds a couple programs to let you convert DBASIC files to TOS format to transmit by modem. Or you can wait for a more significant revision (they seem to arrive monthly).

HOME COMPUTING FAIR: The Home Computing Center at Tanforan has asked us to participate in another fair. They promise that this year we will be promptly paid for whatever public domain disks they sell for us. Dates: Fri - Sun, Sep 25, 26, 27. Shall we participate? It was fun last time. If we have enough volunteers to staff it, I would vote for it. We need one person to be in charge each day. If willing call me at 753-8483.

THE NEW TOS: From Ornjuce, newsletter of the Orange County user group, comes a hands on report on the revision of TOS. Features: Faster disk access--as much as 40 to 50%; faster formatting from the desktop; desktop selection of blitter, on or off; even with the blitter of the routines that perform those functions have been speeded up; windows will now scroll smoothly by holding the mouse button down--no need to keep clicking--the blitter substantially speeds the scrolling; for you one disk

users, fewer swaps are required when copying disks; when printing a file to the screen all characters are now shown instead of just ASCII 32-127; and a few system crashing bugs have been Raided. If they got the ones that crash VIP Prof., I will give a personal award to the programmer. WARNING to VIP veterans: When reaching

Meetings

Next Meeting: Sat. Sept. 12, 1987

October Meeting: Sat. Oct 3, 1987

800/XL/XE 10:00 - 1:00 ST 12:00 - 3:00
19th Ave. Diner, 19th Ave & Lincoln, San Francisco

Please don't park in the parking lot

for the F9 key to recalculate the sheet, DO NOT miss and strike F10, the graph key. All hell breaks loose.

BARGAINS: Here is a hot one (but only one). Be the first (and only) on your block to own an ATARI daisy wheel printer. Not the 1027 drum printer but a real, ATARI labeled daisy wheel. It connects directly through the serial port to the 8-bit machines and we think it has a built-in modem. It is the fabled XDM121, promised when the XE line was introduced but never delivered. Earl Powers picked it up as part of a purchase of other equipment and will sell it for a song. Call him at 845-5025.

----Bill Zinn

THE NEOPHYTE EIGHT BITTER

By Alan Stancliff

Here I am sitting in front of the ATARI 130XE that I bought about a year ago, getting ready to write my first article about computers. I have just about gotten over being a rank beginner and feel as though I am starting to understand my machine. But this understanding was bought at the price of a frustration at the lack of material for RANK beginners. Having been a beginner and having encountered these frustrations, I want to help other new 8-bit ATARI owners avoid some of the hassles I had. So, . . . If you are an experienced computer user, forgive me for covering such elementary material. It's a dirty job, but someone's gotta do it!

I got the ATARI because I needed a word processor and didn't have much money. Having just collected a very small Workers Comp award, I started looking at computers. I had just about settled on getting a Commodore at the Sears in my neighborhood when I dropped into the CAL BERKELEY COMPUTER store.

Continued on p 2



THE NEOPHYTE 8-BITTER

Continued from p1

They had the ATARI 130XE, disk drive, 1027 "letter quality" printer and several bundled programs (including ATARIWRITER PLUS) for a little under \$400.00! That was almost half what the COMMIE would cost. So I got it. At another store... (but that is another story and a sad one at that) A short time later, I retired the printer and got a CITIZEN 120D, which is a bargain.

Of course, after I got started writing with it, I noticed that there were other programs that could be used with the computer. Word processors were my first interest. Then other application programs related to preparing manuscripts beckoned to me. But I could not help noticing that ATARI programs were not nearly as available as programs for other computers. ATARI programs seemed heavily weighted toward the game scene, an area of little interest to me. And the instructions for using the programs and computers (which were called by a weird jargon word "documentation") were not written for "the compleat idiot" like me!

However, I eventually began to discover a lot of things that could be done with the ATARI that were fun. And I discovered how to get around many of the limitations of the programs. In short, I began to discover the joys of "tinkering".

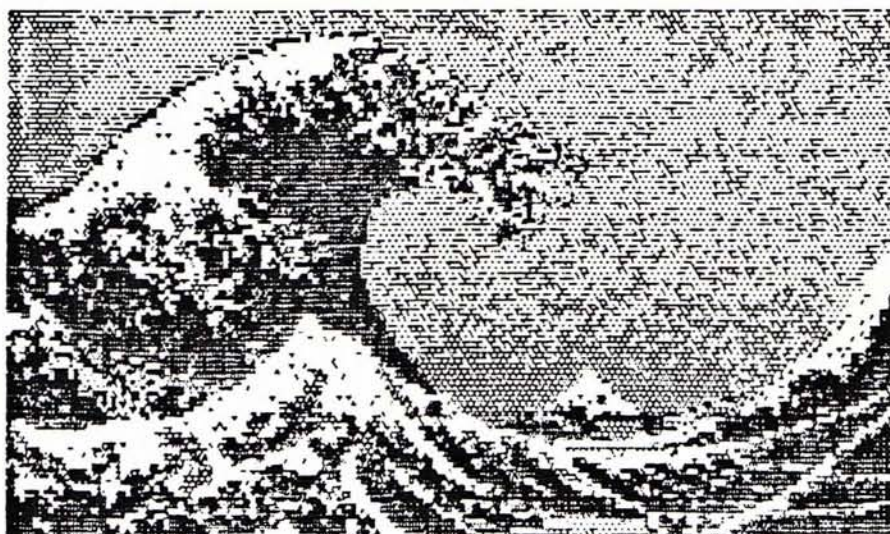
The eight-bit ATARI is a Model T Ford. With its elegant operating system and eight bit 6502 chip, it was state of the art when it came out. Well engineered, it was tough. But the "average Joe" could figure it out, albeit with some work.

Although, the eight-bit does not have the power of the

larger machines, and although most of the major software firms are dropping it, the XL/XE series still has a fanatical following. That following consists of several types. A) the XE first time buyer like me who wants an inexpensive word processor; B) the game player who buys the pre-eminent game computer available; and C) the user who bought the system when it was the most powerful home computer available and who has considerable money/time invested in software, modifications and programs. And the ATARI invites the linker.

So beginners, use the ATARI for the purpose you bought it. But be aware that there is much more to the ATARI than first meets the eye. The user groups are a mine of dedicated types who can help you "linker" and have fun learning such things a programming. Keep trying to get through and around the strange jargon and keep your sense of humor. The user group members are extremely generous with their time and will not treat you as if you are an idiot for not understanding the basics.

This column will have hints for the beginning user. In the next several columns, it will cover such topics as A) getting the ATARIWRITER PLUS to have outdented margins, B) how to use the modem and get online with the ABACUS bulletin board, etc. If any of you beginners out there have any questions for this column, please send them to EIGHT BIT NEOPHYTE, c/o ABACUS P.O. BOX 22212 SAN FRANCISCO, CA 94122 or if you have a modem and know how to use it, you can send me E-mail at the ABACUS BBS (415)587 8062. I will try to answer questions in general in the column. By sending your questions to me, I will get the enjoyment of researching information I don't know and have the opportunity to pay back my debt to all those beautiful ABACUS members who have been so patient and generous to me with their knowledge.





NEWSLETTER CONSTRUCTION SET

by Charles Cherry

ST OWNER BAILS OUT

Yes, I'm returning to the 8-bit Atari. I've had an ST for a few months now and I must say I like FLASH, Publishing Partner, and CAD 3-D. However, I like the 130XE better for some obscure reasons, mostly I'm just very comfortable with it. So the ST is for sale: \$725.00 for a 1040ST color system, good as new (actually better than new since I souped up the monitor a little). I'll be happy with the 130XE for another year or so.

BUYING A COMPUTER

Or, what would you recommend to a friend?
I have a friend in Southern California who has decided he needs a computer. He asked me for advice. His principal use is word processing (he's writing a book), but he wants to be able to do "all the other things, too." I told him to wait a month and see what Word Perfect looks like on an ST. If it looks good, he can set himself up for under \$1000, including software and printer.

If he can't wait, I told him, get an XT clone. That will also be under a grand. He travels a lot, so I also suggested that he consider the NEC and Toshiba portables, just under \$2000 for a complete system.

After completing his "research," he spent \$1200 on an Apple IIe because "there is so much software available for it..." What can you do?

NEWSLETTER DEADLINE

You can upload articles and comments for the Newsletter to our BBS. Or, you can give me a call and I will arrange for pickup. We much prefer getting things in digital form, on disk, cassette, or by modem. Deadline for the October issue is Sept 18, 1987.

BARGAIN OF THE MONTH

Kay-Bee Toys does it again. Wireless (radio controlled) joysticks: \$12.99 a pair. Also track balls for \$12.99 each. These are genuine Atari items which originally cost \$40.00. The wireless joysticks can also be adapted for short range (10 - 20 feet) remote control projects, such as robots. Each joystick provides 5 switch channels, that's a total of 10 channels for \$13. These are a steal.

Larry Rhodes will show you ST owners how to convert the trackballs to replace your mouse.

Buy a bunch of these controllers now and use them as presents for all the people who are going to get game machines for Christmas. Niel Harris will give you a list of them.

Kay Bee Toys is in Serramonte Shopping Center, San Francisco, and a lot of others.

REPORT FROM THE LIBRARY

by Ed Ness

This month we have another member who donated his surplus computer magazines to help make your library more complete, so I will thank DAVID BARBOUR for the donations of ANALOG, ANTIC, & FORTH DIMENSIONS.

If more members could be like the members of the past two months who gave to the club library it would help make the library more complete and useful for the new and older members.

Now to list some more of the articles that I have found in the various computer magazines.

PROGRAMMING

APPROACH TO GAME PROGRAM DESIGN, BEWARE RAMTOP DRAGON, DISK BACKUP PROGRAMS, GAME PROGRAMMING, GENTLE INTRODUCTION TO PROGRAMMING, HUMAN ENGINEERING, INTERPRETIVE PROGRAMMING, INTRO TO MULTIPROGRAMMING, MYTH ABOUT PROGRAMMING, PEOPLE PROGRAMMING, PROGRAM FOR WRITING PROGRAMS, TEXPLOTT II, USING TEXTPLOTT FOR ANIMATED GAMES

WORD PROCESSING

7 FOR THE 8 BIT, ATARI WORD PROCESSOR, CREATING A SIMPLE WORD PROCESSOR, DE RE LETTER PERFECT, FIRST XLENT WORD PROCESSOR, LEARNING WITH COMPUTERS, POOR PROGRAMMERS WORD PROCESS, SCRIPTOR: ATARI WORD PROCESSOR, SELECTING RIGHT WORD PROCESSOR, WORD PROCESSING SYSTEMS.

More in later issues of the NEWSLETTER.

8-bit equipment for sale:

850 Interface (1 parallel, 4 serial ports), \$90

1050 Happy drive with version 7 Happy software, \$150

Bit-3 80 column card (for Atari 800 only), \$50.

Axlon 128k Ramdisk with Axlon 32k board (Atari 800 only), \$60

Atari 800 computer with Fastchip, Omnimon and coldstart reset, \$100

For inquiries or offers please call:

Eric Clausen @ 929-8510. Reasonable offers considered.



Notes from an Avatar

by Marjorie D. Martin

ULTIMA IV is a fascinating game that is very much like a jig-saw puzzle, a detective story, and a knight and dragon play of the middle ages.

However, for the younger players, ten or twelve years old, translating and keeping the magic spells at their fingertips as they play may be difficult. The chart in the next column can be pasted on a 4 by 6 card and kept by the computer. Being able to mix and cast spells quickly is part of the excitement in playing ULTIMA IV.

HINTS AND CLUES

Note taking is a must when attempting to solve text adventure games. When playing ULTIMA IV, keep a separate set of pages for every castle and town. List the name and profession and what is said in response to the questions you ask. These responses often contain "trigger words." These words will get additional information from the computer. The easiest way to mark these "trigger words" is to draw a rectangle around the word. Then, when you refer back to your notes, these trigger words will be easy to find and use again.

Asking Lord British "Health" and he will answer "I am well, and thou?" If you answer "No", then Lord British will bring the character's hit points up to full.

WINNING THE GAME

Completing the quest for avatarhood and reporting back to Lord British via the U.S. Postal Service will earn you a "Hang on the wall/suitable for framing" Avatarhood Certificate.

Perhaps an Avatarhood Certificate is not the most important document I shall ever own, but, to a computer gameplayer, the document looks quite official hanging, as it does, between my high school diploma and my honorable mention certificate from the camera club.

[Editor's note: Check Jerry Pournelle's column in the Sept '87 BYTE for notes on using a database with adventure games. Play the game on your ST, keep notes on your 8-bit with Synfile or Data Perfect. Very neat.]

Ultima IV

AWAKE	B, C
BLINK	D, E
CURE	B, C
DISPEL	F, A, C
ENERGY FIELD	F, A, D
SLEEP	CIRCLES
POISON	BLUE
FIRE	RED
LIGHTING	WHITE
FIREBALL	F, A
GATE	
HEAL	B, D
ICEBALL	F, H
JINK	F, G, H
KILL	G, F
LIGHT	A
MAGIC MISSILE	A, A, F
NEGATE	C, H, A
OPEN	A, E
PROTECT	A, B, C
QUICKNESS	A, B, E, E
RESURRECT	
SLEEP	D, D, B
TREMOR	A, E, H
UNDEAD	A, C
VIEW	G, H
WIND	A, E
EXIT	E, D, A
Y(UP)	D, E
Z(DOWN)	E, D

The GATE and RESURRECT spells are acquired by asking certain wizards or mages for the reagent types that are used in mixing the spells.

Other spells are altered as one plays the game and receives information from the villagers.

This chart is a translation (from old English) of the Magic Book that comes with the ULTIMA IV game.



AN OPEN LETTER TO DAVID SMALL

Monday July 27, 1987

Dear Dave,

Your article on "Why Don't Women Like Computers?" was reprinted in the ABACUS newsletter in San Francisco.

I am one of those women who does like my computers and enjoy using them. I have an Atari 800 XL, a little 1020 plotter (which serves as my printer at present) and have recently acquired an Atari ST 1040 (have yet to choose a printer for it).

My interest in computers is graphics. I had the opportunity to try an expensive system once, which aroused my interest. It was of course totally unaffordable. The older Atari offered me the most color for the least money. On it I used Rambrandt software from Antic and for a drawing tablet replaced the Atari touch table with an Animation Station from Suncom, which has better drawing control. With a little effort I can get a printout on the 1020 plotter.

Frankly, I'm not interested in spreadsheets or databases. I do have word processing software. And the entire household enjoys games. We are all adults!

I do little programming. My math education was weak. I got through college with very little, which was almost disastrous in chemistry. I lost interest in Basic when I discovered I could draw something in Logo in a few lines, which required a page full of programming in Basic. I do enjoy the intricate designs I can create in Logo and am looking forward to the use of more color and more memory on the ST.

I think that one reason women are not interested in computers is that they do not realize what they can do with them. The creative design aspects have not been shown to them, has not been approached in advertising or elsewhere. The potential for design in crafts, interior design, etc. are enormous.

I have designed sweaters on both Ataris. Elaborate fairisle designs can be illustrated and worked out, and with a printer, could be printed out. I have created some quilt designs. I met another woman who planned to illustrate a book. Few artists have recognized the potential for drawing on the computer yet. Even without the high resolution of professional machines there is a tremendous range for creativity. The design possibilities are endless.

I think if more women realized that there is software for creative uses, that they could fairly easily use, more women would be reached. They don't have to program. They don't have to worry about math. Lines and color are there for you to experiment with.

As further background, working as a word processors for temporary agencies gave me a sufficiently comfortable background to not be afraid of my own computer when first acquired. I had learned more than I had realized. I am also an artist who previously painted in a hardedge style with acrylics.

I do go to the local user group ABACUS, which has very few women. And though much of what they talk about is not useful to me, every now and then something is. It is a place to get questions answered, to learn about new software and to see what other people are doing.

Sincerely

Gene Lamken
(Mrs. Cecil Lamken)
773 Colby Street
San Francisco, CA.
94134

P.S. I am going to give a copy of this to the ABACUS editor who reprinted your article so that he can print my reply to you if he wishes in the ABACUS.

I also have no objection to being quoted if any of my ideas are useful to you.



"With this computer, I'm interconnected with all other gurus, so I can give you a more reliable version of truth."



IS THE 8-BIT DEAD?????

by John B. Sloop

reprinted from the PACUS REPORT



Sure, we've been hearing it for a couple of years now, "The ATARI 8-bit machine is dead". Although ATARI denies this, I've compiled a few interesting facts, (note I said facts, not rumors, which in the past is all we have had to go on), that demonstrate clearly to me that the 8-bit is dead.

For instance, if you insert a PAC-MAN cartridge upside-down into a 1200XL and turn it on, "Clyde" will appear, saying what sounds to me like "I buried an 8-bit!". Scary, isn't it. There are many of these hidden clues all over, if you just look for them.

One of the last pieces of software that ATARI has put out for the 8-bits, was ATARI PLANETARIUM. Boot that program and look at the constellation ARA (which, by the way, means ALTAR in English) with the lines option engaged.

Using the stars as dots and the lines as dashes, you can make out, in Morse Code, the phrase "8B8 IF", which of course means that the 8-bits would be 8 years old IF they had lived. How can you argue with proof like that? This could not be just an accident.

These hints of the death of the 8-bits have been coming for quite some time. Take a look at the cover of ANALOG #44. There you will see a picture of what appears to be an operation being performed on an ATARIST. And what is found inside, looking like a malignant tumor? A 130XE! Although that is pretty blatant, there is also a subtle clue on that cover. In yellow on that cover are the names of three articles inside the magazine for the 8-bits, "Arm Your ATARI", "Ramcopy", and "8-Bit Parallel Interface". The initials of these titles are "A Y A R 8 B P I", which is an anagram for "RIP 8-BIT YAA!". How much clearer could they make it? They are not only stating that the 8-bits are dead, but that they are glad of it.

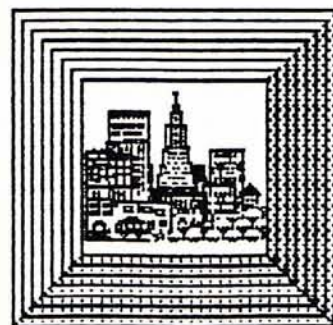
Still not convinced? You people are hard to please. OK, grab your copy of

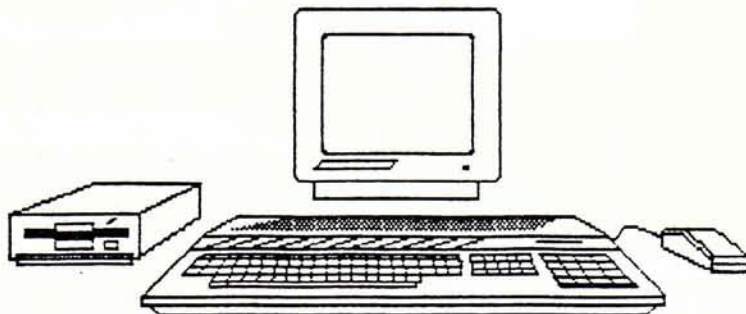
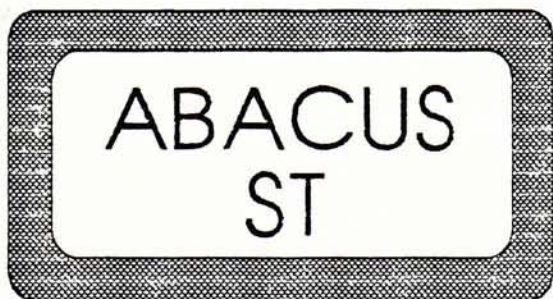
the April 87 ANTIC. Look at the cover and what do you see? A bunch of IRS men chasing a couple of guys carrying banners that say "130XE". Now think, what does that mean? I SAID THINK!! That's right, only two things are inevitable, DEATH and Taxes. What at first glance appears to be a simple "tax-time" issue, in fact is clear proof that the 8-bits are dead.

These are only a few examples of what you can find if you only look with an open mind. But most people don't want to see these things, because they don't want to face the facts.

I can't understand why ATARI doesn't just come right out and announce that the 8-bits are dead. It has been proven in the past that these charades don't work. When ELvis died in 1963, no one believed that fat lookalike they got to replace him was really Elvis. When the lookalike died in 1977, no one bothered to try and get a replacement. When Paul McCartney died in a car-train accident in the late 60's the remaining Beatles denied it, while all the time giving clues to his death in songs and on album covers, much like the clues showing up for ATARI's 8-bits today. We aren't stupid, and we know what's going on. We also know that Andy Kaufman is working for ATARI, but that is another story.

Like I mentioned before, death and taxes are inevitable. So let's raise our glass to our fallen friend, and also toast our new found friend, the ST. "The King is dead, long live the King".





HELP WANTED

by Rob Re

Well, it seems like Jay London will be unable to continue on as one of the ST editors, so I am making a plea for help. If you would like to assist in the ST section of the newsletter, please let me know. I do not have the time to do it all myself, so we are looking for volunteers to help, either in putting together the ST section or by contributing articles. I would like to see some members contributing regularly, perhaps in the form of regular columns. If nobody in the club cares enough to help out, then our newsletter soon will be made up totally of articles from other club newsletters. I think we have enough talented and creative users in our club who can contribute to making our newsletter a quality publication. Please give me a call if you have any interest.

RANDOM THOUGHTSON

ATARI'S PURCHASE OF FEDERATED -- Who would have thought that Atari would be diversifying into retail stores? Well Jack did it again, doing what nobody would expect him to do. In what appears to be another bargain purchase, Atari looks like it is going to purchase controlling interest in the 65 store Federated chain. Why, you might ask? Well, you may have read in the papers some possible reasons, included among them the possibility that Atari is attempting to gain more retailers for its products. I do not think this is the real reason, especially when you consider that Federated already carries the ST computers and software. I have a couple of other possible reasons. Maybe the Tramiel sons wanted to be able to buy car stereos and car phones for their cars at wholesale. Or better yet, maybe it is a tactic to reduce Commodore's retail outlets. After all, do you really think that Federated is going to continue to carry Amiga's after Jack is in control? Who knows, maybe Jack Tramiel just can't pass up a bargain when he sees one. COMPUTER ILLITERATES -- An acquaintance of mine is seriously considering the purchase of a computer to be used in conjunction with his synthesizer and wants a machine

with MIDI capability. He visited a local store that specializes in computers and music, and the salesman, when asked about the ST computers, responded that my friend should stick with a "real" computer like a PC. Gee, for the last couple of years I was not even aware that I was doing so much work on a "fake" computer. Maybe somebody can come up with a way to slow ST's down and cripple the 68000 so that it is not a full 16 bit processor. Then Atari would be able to sell a lot more computers to people like the salesman mentioned above.

MEGA'S ALMOST HERE -- It is September and still no sign of the promised Mega ST's (or laser printer, or PC clone, or modem....). In fact one local store cannot even get a retail price out of Atari yet for the Mega machines, even though Atari says the machines are on the ship and should be in the stores this month. When they do hit, probably this month, do not expect to get any discounts. Until they are readily available, only a limited number of dealers will be getting Mega's, and apparently the discount leaders are not on the list. I guess Atari wants us to pay list price. That sounds a little un-American.

MEGA COMPATIBILITY -- Antic has set up a section on Compuserve so that developers and users can report any compatibility problems they run into with commercial software when run on the Mega's. As of August 20, the only reported problem is the Free Memory feature in STWriter. Apparently the memory counter in the program only displays 6 digits, so it cannot display free RAM above 1 meg. The online file is set up so that any users can send notes on compatibility problems they encounter.

HOME COMPUTING CENTERS' FAIR COMING -- It's that time of the year for Home Computing Centers' annual fair at Tanforan Shopping Center. It will be held from Friday September 25 to Sunday September 27. Some of the scheduled participants include Atari Corp, Microsoft, Timeworks, WordPerfect, Broderbund, Electronic Arts, and Activision. It should be a great opportunity to talk with company reps so we can find out the new release dates for products that were supposed to be out in August or September. Who knows, maybe some of the new programs will even be there for sale, and perhaps this will be the year Atari actually shows up as promised.



Reprinted from CrnJucwe, July 1987
Atari Computer Association of Orange County, Fountain Valley, CA

TOS: Stardate 8704.22, The Adventure Continues

The new version of TOS I got from Atari's Cindy Clavern at the show is dated 4/22/87, and offers some welcome changes over the old version. First of all, the GEMDOS routines have been cleaned up, and now disk file access is much, much faster. Perhaps by as much as 40-50% in some cases. There is especially an improvement in reading and writing small chunks of data. And programs now load much faster. If you have a hard disk with a lot of stuff in some folders, you'll notice this difference right away the first time you load a program.

Other changes include the addition of a new, faster, disk format option to the format routine of the XBIOS. The new version of the GEM Desktop now uses this faster format. This means that the GEM Desktop now does essentially the same thing as those "fast format" programs, although the disk capacity remains the same. Combined with the new GEMDOS routines, this can make a huge improvement in disk access times.

Of course, the blitter chip is now supported by the Line-A interface. If the chip is present in the machine, then the GEM Desktop includes a choice in the OPTIONS menu for "Blitter". This allows the user to turn the blitter on and off, in case of software that does not work properly with it turned on. A checkmark appears in the menu when the blitter is active. If the blitter is not present or enabled, then software routines do the blitting chores, just like in the present machines (although the routines have been somewhat improved, speedwise, over the old version). If the chip is there, then the Line-A routines set it up and let it do the work.

There are other changes that aren't as noticeable at first, but can really make a big difference in some applications. First of all, you can now smooth scroll through a window by simply holding the mouse button down on the arrow or page controls, instead of having to repeatedly push the button. This isn't any faster on a machine without a blitter chip, but it is easier. But with a blitter chip, it makes scrolling through a window **MUCH** faster and easier.

There was a bug in the GEM AES in the older version of TOS which caused the system to crash when you entered the underscore character (Shift-minus) in some dialog boxes. This is now fixed.

Let's see... On the Desktop, besides the faster disk formatting, there are a few other changes. Fewer disk swaps are needed when copying files on a single disk drive system. (Finally!) ALL characters are now shown when you print a file to the screen, instead of just those with ASCII values of 32-127. And "Print Screen" and "Save Desktop" now have an alert to ask if you are sure before acting.

There are some changes which may affect the compatibility of some software packages. For example, the game Xtron does not work with the new TOS, although I have not had any problems with any of the other programs I have tried. (Which includes most of those on my hard disk.)

I would expect those programs which do work to be quickly updated in most cases. I tell you more here, but these kinds of changes are mostly of interest only to hard-core programmers. (Ask me on the BBS if you really need to know.)



In the sea of life
In the sea of death
My soul, tired in both
Seeks the mountain from which
The waters have receded.



reprinted from POKEY PRESS, March 87, Atari Computer Club of
Palm Beaches, Boynton Beach, FL

MICROFLIPPY DISK-314 DRIVE MODIFICATION

by Ken Meyer

Reprinted from ASTUN, the Atari ST Users News

(Editor's note: Yeah. When I read the title of this article while flipping through a recent copy of ASTUN, I said to myself...."Now there's something you don't need every day - the ability to store the contents of two single sided disks, AS single-sided disks, on one double-sided disk." but as I continued to read the article (if nothing else, to figure out why somebody would want to do this), I began to understand the uses of such a modifications. Of course, I don't have an external drive for my 1040ST (at least not yet), so I haven't played around with the modification. But if you do have an external drive, and are interested in maximizing your storage of library disks, this may be just the modification for you. And as always, make sure you know what you're doing before you start poking around inside the guts of your drive....I mean, you wouldn't want an auto mechanic poking around inside your brains, would you...unless, of course, your name happens to be Pinto or Edsel...)

This modification allows the use of a single disk to store contents of two single-sided disks. A switch is added to the drive to allow normal operation (single-sided or double-sided) or backside only (as a second single-sided surface). This is similar to the flippy disk concept used with the 5 1/4 inch disk to provide two single-sided surfaces on one disk. On the 5 1/4 inch disk, the second surface was made available by punching an extra hole in the jacket and inserting the disk upside down. In the case of the 3 1/2 inch microflippy to be described below, you must have a double-sided drive. Insert the disk normally, and select the second surface using an added switch.

This microflippy modification is especially useful for storing protected disks in a library because you can store the EXACT protected contents of two single-sided disks on one disk. For this type usage, the number of disks used will be cut in half. This could drastically reduce the number of disks used in your library of programs. There are obvious disadvantages. The second surface will not be readable on an unmodified drive. If you write to the disk with the switch in the wrong position, you may run over the contents of the other single-sided surface. (You cannot protect the two surfaces separately.)

The microflippy is easily added to an Atari SF314 double-sided drive by installing a small SPDT toggle switch in the SIDE 0 SELECT line. See Figure 1.

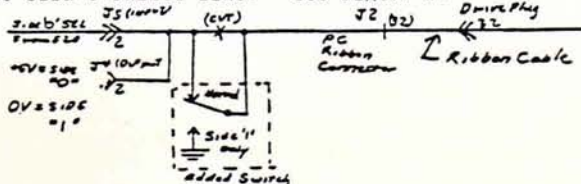


Figure 1. Schematic for SF314 Microflippy Modification

This line comes from pin 2 of both the input and output connectors and goes through the ribbon cable to the drive mechanism as ribbon cable pin 32. The line must be cut someplace after the input/output connectors. The pole of the switch (wiper) must be connected to the end of the line going to the ribbon cable connector pin 32. The other end of the cut line must be connected to one of the switch contacts. When this contact is selected, the drive will function normally. The remaining contact should be connected to a signal ground. When this contact is selected, side 1 selection is forced, regardless of the selection signal from the computer. One could cut wire 32 in the ribbon cable itself to install the switch. I chose to cut a PC path just between the ribbon cable connector and J4, the output connector on the small board at the rear of the SF314. This approach is illustrated in Figure 2.

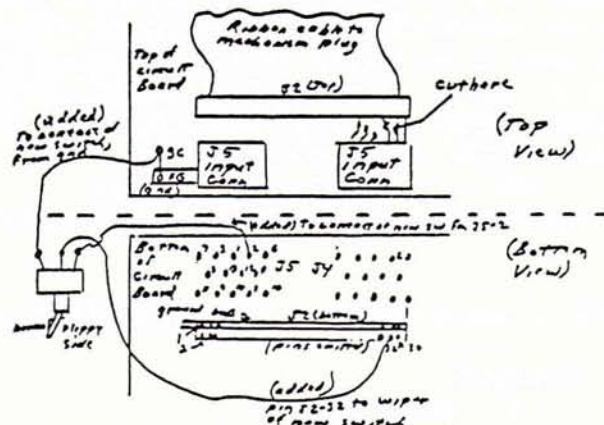


Figure 2. Microflippy connections on SF314 I/O and Power Input Circuit Board

I chose to mount the switch on the lower left side of the front panel of the drive. Specifically, I placed a 3/16" hole 13/32" from the bottom edge of the top cover and a little more than 3/8" from the cover side edge. I used a Sprague switch No. QSP-1104-01.

This modification is in successful use on SF314's in two systems. One of them is a 1040ST for which the microflippy capability is used on the external drive (the 1040ST was previously modified to make the external drive the primary drive). The microflippy capability could be added for the internal drive without much difficulty.

This modification is very simple in concept, and should not be difficult if you have some basic electronics skills. If not, you may wish to have someone else do the modification for you. Good luck, I hope you find this capability as useful as we have. —

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